

December 21, 2001

TO: Environmental Health Managers
District Health Directors
VPI-SU Soil Scientists
Office of Environmental Health Services Staff
Authorized Onsite Soil Evaluators

GMP #115

FROM: Donald J. Alexander, Director
Division of Onsite Sewage and Water Services

SUBJECT: Onsite Evaluation and Design Quality Assurance and Training

After two and one half years of experience with the Authorized Onsite Soil Evaluator (AOSE) program, and apparently far more successes than failures, there are several identifiable program needs. Some of these will be addressed in the forthcoming *AOSE Regulations*. One that will not be addressed in the regulations is the need for an impartial method of identifying the strengths and weaknesses of our site evaluation and design programs in both the public and private sectors. Attached is a process for evaluating both public and private sector site evaluations and designs that I plan to implement starting the first quarter of 2002 and continue on a quarterly basis.

The purpose of this evaluation tool is to identify both strengths and weaknesses in the AOSE and Environmental Health Specialist (EHS) site evaluations and designs. This so the Virginia Department of Health (VDH) and other interested parties can target training, make program adjustments and fix or strengthen the weaknesses and keep or optimize the parts that are working well. The evaluation tool is intended to render a fair, impartial, and consistent evaluation of both public and private sector site evaluators. The results of the process will be shared with EH managers and AOSEs and will be used to better focus VDH training, assist in recognizing other AOSE as well as VDH training opportunities. The results will be reported anonymously and will not be used as an enforcement tool.

The evaluation process is attached for your review. The purpose of the process is to initiate a program to assure the ongoing improvement of both public and private sector site evaluations and designs. As a side benefit, I hope the process will begin to instill mutual trust

and confidence which will build over time. I also expect the time spent will prove to be educational for all parties. Any suggestions you may have to further these goals are encouraged. Initial comments should be received by January 31, 2002.

Finally, everyone's participation is necessary for this process to work. Initially, participation may seem limited to a few individuals for a few days. However, the breadth of participation and the scope of commitment may be greater than initially anticipated. The document indicates there will be four review teams working each quarter. The review teams are intended to be made up of an AOSE, an EHS and a Virginia Tech soil consultant and I expect their work will take 2.5 to 3 days per quarter. My intention is to invite AOSEs and EHSs to participate as team members and to change the makeup of the review teams quarterly.

GMP #115
Virginia Department of Health
Onsite Quality Review Process

The purpose of this policy is to create an evaluation process that will identify both strengths and weaknesses of the Authorized Onsite Soil Evaluator (AOSE) and Environmental Health Specialist (EHS) site evaluations and designs and result in the long-term improvement of all site evaluations and designs. The evaluation tool is intended to render a fair, impartial, and consistent evaluation methodology for both public and private sector site evaluators. The results of the process will be shared with EH Managers and AOSEs and will be used to better Virginia Department of Health (VDH) training as well as assist in recognizing other AOSE and VDH training opportunities. The results will be reported anonymously and will not be used as an enforcement tool. Specifically, no enforcement or personnel actions will be initiated against any AOSE or EHS as a result of findings made during a quality assurance evaluation. Furthermore, no permit will be revoked based on the findings of a quality assurance evaluation.

Once each quarter, beginning with the first quarter 2002, four Quality Review Teams will be appointed by the Director of the Division of Onsite Sewage and Water Services to evaluate eight site approvals. The Review Team will consist of a Virginia Tech Regional Soil Scientist, an AOSE from the private sector, and an Environmental Health Specialist (who may or may not be an AOSE). Additional team members may be considered on a case-by-case basis when determined to be beneficial to the review process.

Each team will consist of individuals familiar with soils and the siting and designing of sewage systems and will typically be familiar with the regionally occurring site and soil conditions where the Review Team will be working. However, there may be instances when one or more members are not specifically familiar with the regional site and soil conditions. Further, from time-to-time, teams may include individuals with a particular interest related to onsite wastewater system siting or design without having a particular level of expertise in the same.

It is the general intent of this process to limit the review of site to those to which individual evaluators are unfamiliar with and can review impartially. In order to prevent the appearance of partiality or prejudgment, team members will not review sites where they have issued an approval (EHS) or recommended an approval (AOSE). Please note that since there is no *economic interest* resulting from these reviews a *conflict of interest* per se is not likely in any event. Team members may review a site or sites that they have previously visited and/or evaluated provided that they have not issued or recommended an approval. When a team member has previously evaluated or visited a site, or has had some other substantive contact relative to the site, they shall note that in their evaluation.

Statewide there will be four teams and each team will review eight sites within one of four geographic areas (see Map 1). Sites to be reviewed will be selected by a methodology specified by the Division Director. Unless otherwise indicated, the director will select two dates and four counties in each geographic area, which will form the basis for identifying sites to be

reviewed. For the county selected, the environmental health manager shall find the first completed AOSE approval occurring on or after the first date selected by the division director and also locate, within close proximity, a completed EHS approval to be reviewed. For the second county, the environmental health manager shall select the first completed EHS approval that occurred on or after the second selected date and geographically close to the AOSE approval. This process will be repeated for the third and fourth counties. Before the site visits, property owners must be contacted, permissions secured and review packages prepared for the review team. No more than half of the approvals reviewed shall be subdivision approvals or certification letters; they should be construction permits so that system designs can be reviewed.

The Division recognizes this site selection process may not be truly randomized, but should serve to eliminate locally introduced biases that might occur. In the event a property owner declines to allow the review team on a selected property, the environmental health manager shall select the next site in chronological order of approval (or another geographically nearby site).

The review team will initially receive an edited copy of the construction permit drawing. The name of the individual approving or recommending approval of the site shall be expurgated as well as any information regarding soils found. After completing a site evaluation and prior to formulating a report, the review team will receive a complete and unexpurgated copy of the file documenting the approval.

The team shall conduct their evaluation in order to make recommendations in the following three areas:

1. **Soil evaluation.** Did the site evaluator do a competent job of rendering the site and soil conditions within the range of expected conditions? Specifically, were critical elements of the evaluation such as depth to rock, water table, restrictive horizons, estimated permeability and landscape position properly identified.
2. **Interpretation.** Did the site evaluator correctly interpret the site conditions observed? Interpretations can be excessively liberal allowing systems to be placed in unsuitable soils, they can be excessively conservative causing needless expense and complexity in a system design, they can be wrong, or they can be correct. A correct interpretation will accurately characterize a site and result in the selection of an appropriate type of system and design.
3. **Presentation.** Does the permit clearly define where and how the system is to be installed? In the case of a subdivision approval or certification letter, is the location clearly defined and does the site comply with the *Regulations* (area and flow). The ultimate reason for carefully siting and designing a system is to assure that a system can be installed on the site evaluated and in accordance with the concept intended by the system designer. The third area of evaluation is to determine whether the system could be installed as envisioned by the designer.

It is recommended that site evaluations be limited to only the specific area approved. The areas of evaluation cited above are the only ones of concern at this time. VDH is not concerned with whether or not this is the only suitable site on the property or the best site for an onsite sewage system. It is envisioned that the review team may work both independently and as a team at different times during the field review. It is hoped that consensus will be readily achieved regarding the site conditions; however, divergent opinions are acceptable and serve to recognize the variability inherent in soils and soil evaluators. In general, site reviews should be completed in 1 - 1.5 hours and always in less than two hours to achieve the level of detail sought by VDH.

After completing the eight site evaluations, the review team shall meet for approximately four hours and identify program strengths and weaknesses and make recommendations for future AOSE and EHS training (as groups). Identifying current strengths is as important as identifying weaknesses so training that is working well is not lost or reduced in effectiveness. Reports are expected to be 1 - 2 pages in length and should be reported by the Regional Soil Scientist to the Division Director within 30 days of completing the evaluation.

Copies of the reports will be distributed to VDH environmental health managers, authorized onsite soil evaluators, and the Virginia Tech Soil Scientists.

Significant Problems:

A measurable probability exists (that's a fancy way to say "one possible outcome is") that at some time a review team will evaluate a site that they find to be grossly out of compliance with the *Sewage Handling and Disposal Regulations (Regulations)*. As everyone involved in the AOSE program is keenly aware, VDH is not in the habit of ignoring possible violations of the *Regulations*. Fear of having a permit revoked would likely undermine the effectiveness of this quality review program. The Division believes the anticipated benefits of an effective onsite quality improvement program outweigh the corresponding risks associated with not revoking permits grossly violating the *Regulations*.

Therefore, in the event a gross violation of the *Regulations* is discovered during a review, the only action required of a quality review team is to note the nature and scope of the problem in their report. VDH's position is that the review committee's purpose is evaluate, review and make recommendations related to onsite training and assisting in creating a program of continuous quality improvement. The review team is charged with evaluating the quality of work of other onsite evaluators and *specifically* is not charged with making case decisions regarding the suitability of the sites reviewed. The case decision regarding the site approval was made at the time of application and is not subject to review by the quality review team.

When a review team finds a site they feel is sufficiently out of compliance with the *Regulations* and the case decision should be reviewed, they are directed to make their request to the Director of the Division of Onsite Sewage and Water Services. The Division Director shall review the findings of the quality review team with the environmental health manager responsible for the area where the approval was granted. If they determine there is sufficient cause, they shall convene a meeting with the property owner, either the AOSE or EHS that recommended approval of the site, and the Virginia Tech soil consultant to discuss the problem. At the property owner's request, the permit may be modified to comply as fully as possible with the *Regulations*. No change will be made to the permit as a result of review teams findings without the full consent of the owner.